

3.0 Preliminary Description of the Proposal and Alternatives

3.1 Objectives, Location and Description of the Planning Process

Objectives of the Proposal (3.1.1)

The Department needs to prepare a landscape plan that will guide both short-term and long-term management of state trust lands in the Lake Whatcom Landscape Planning Area, consistent with DNR's Forest Resource Plan (1992), DNR's Habitat Conservation Plan (1997), Forest Practices Rules, and the Engrossed Second Substitute Senate Bill 6731 [now 2000 Washington Laws Chapter 205] passed in the year 2000.

The proposed action is the adoption, by the Board of Natural Resources, of a landscape plan for state trust lands in the Lake Whatcom Landscape Planning Area in accordance with the policies of the 1992 Forest Resource Plan.

The purpose of the landscape plan is to develop a management strategy that will provide environmental protection on DNR-managed lands and contribute to water quality in the planning area, while also preserving the economic viability of those same lands for the long-term benefit of the trust beneficiaries.

Description of the Physical Location (3.1.2)

The Washington State Department of Natural Resources is proposing a landscape plan for state trust lands in the Lake Whatcom Landscape Planning Area, as identified in Map 1 of Appendix C.

The Lake Whatcom Landscape Planning Area encompasses approximately 15,660 acres of forested state trust lands in western Whatcom County. The planning area lies immediately east and southeast of the City of Bellingham, and includes lands within the Lake Whatcom watershed boundary, a block of lands west of Cain and Reed Lakes, and small, isolated parcels immediately adjacent to the watershed.

Description of the Planning and Environmental Review Process

(3.1.3)

Process for identifying and developing the proposal and alternatives

(3.1.3.1)

Pre-1999 planning initiatives: Planning for the Lake Whatcom Landscape has spanned several years. This earlier work has helped today's planners identify and develop the proposal and alternatives.

In the late 1980s, members of the Natural Heritage Task Force in Whatcom County identified property owned by Trillium Corporation as desirable for public ownership. This property was located throughout Whatcom County and included approximately 7,500 acres in the Lake Whatcom watershed. At the request of Whatcom County, the Department of Natural Resources (DNR) agreed to initiate a land exchange with Trillium. Overall coordination was provided by the Whatcom County Land Trust with involvement by State Parks and Recreation Commission, Trust for Public Land, Whatcom County, City of Bellingham, Department of Natural Resources, and Trillium Corporation. The exchange, one of the most complicated in DNR history, was completed and approved by the Board of Natural Resources in January 1993.

Part of the agreement with Whatcom County to initiate the exchange required the county and DNR to conduct a joint planning process and produce a forest management plan for state trust lands in the Lake Whatcom watershed. This agreement, along with the Department's *Forest Resource Plan* policy of developing plans for specified landscapes, was the impetus for initiating the first effort to draft a Lake Whatcom Landscape Plan.

In September 1994, Commissioner of Public Lands Jennifer Belcher gave approval to begin the planning process for the Lake Whatcom landscape planning area. Participants assisting DNR in this first planning effort included: Lummi Tribe, Nooksack Tribe, Washington Department of Fish and Wildlife, Washington Department of Ecology, Water District 10, City of Bellingham, Whatcom County, Lake Whatcom Forestry Forum, representatives from the Forest Industry, and citizens from the communities of Sudden Valley, North Shore, Glenhaven, and Bloedel-Donovan Park. The department initiated the landscape planning process, then after a couple years into it a decision was made to put the planning process on hold until a Watershed Analysis could be completed for the Lake Whatcom watershed.

Watershed Analysis is an assessment and management prescription process. Once one is initiated, the process is prescribed by the Forest Practice rules. Watershed analysis is designed to address the cumulative effects of forest practice activities on fish, water and capital improvements within a watershed. Resource topics

assessed include mass wasting, surface erosion, hydrologic change, riparian function, stream channels, fish habitat and water supply/public works facilities. If the assessment process finds there is a high likelihood of adverse change to specific vulnerable resources as a result of forest practice activities, then management prescriptions are written to mitigate the potential adverse impact. These prescriptions exceed the standard forest practice rules and apply to all state and private landowners who conduct forest practice activities within the watershed. The department completed watershed analysis for the Lake Whatcom watershed in July 1997. A draft landscape plan was completed in December 1997.

In early 1998, the Department reevaluated its overall landscape planning program and the draft Lake Whatcom Landscape Plan was placed on hold. However, the assessment work and Watershed Analysis conducted during that planning process is being used to help develop and evaluate the alternatives for this proposed action.

1999 Legislation: In 1999, Second Substitute Senate Bill 5536 (1999 Washington Laws Ch. 257) was passed by the legislature directing DNR to initiate a pilot project for the Lake Whatcom watershed to determine what factors need to be considered to achieve higher water quality standards than those required under the Forest Practices rules (RCW Ch. 90.48) and identify additional management actions that can be taken on state trust lands to contribute to such higher water quality standards. The legislation directed DNR to establish an advisory committee consisting of representatives from the city of Bellingham, Whatcom County, Water District 10, Dept. of Ecology, Dept. of Fish and Wildlife, Dept. of Health, and 3 citizens to assist with this project. The results of this work influenced the alternatives being developed for this proposed action, particularly since many of the same stakeholders have been involved in the work.

2000 Legislation: In 2000, the state legislature passed E2SSB 6731 (2000 Washington Laws Chapter 205). This bill directed DNR to ensure that the Landscape Plan alternatives would address the following issues:

1. Riparian zones along all fish- and non-fish bearing streams, based on management standards that address the protection of water quality and riparian habitat.
2. An approach to managing road construction in areas with unstable slopes.
3. A road management plan for the watershed.

2000 Washington Laws Chap 205 also directs DNR to work with numerous groups to develop the plan, including the Lake Whatcom DNR Landscape Planning Committee. This inter-jurisdictional committee is comprised of representatives from Whatcom County, Water District 10, City of Bellingham, Washington State Departments of Health, Ecology, and Fish & Wildlife; the Lummi Tribe and two private citizens.

The Lake Whatcom DNR Landscape Planning Committee (the Committee) was charged by the Legislature to work with DNR to complete a landscape plan for DNR-managed forested trust lands around Lake Whatcom. DNR and the Committee drafted a set of roles for the landscape (environmental, cultural, economic, and community) and came to consensus on a set of objectives to guide management activity decisions. These roles and objectives also helped shape the alternatives identified in the PDEIS.

With input from the Committee, DNR identified several issues to be addressed by the plan beyond those identified in 2000 Washington Laws Chapter 205, including:

1. management of structural diversity (forest), water resources, and slope stability with a focus on public safety;
2. fish habitat;
3. wildlife habitat;
4. cultural resources (cultural use, historical and archeological areas);
5. trust income opportunities (commercial timber, non-timber production such as leases, minerals, special forest products) and associated transportation network;
6. public use & recreation;
7. viewsheds;
8. environmental education; and
9. capital improvements.

In addition to the Committee, DNR has consulted with other major forest landowners, the Lake Whatcom Management Committee and the Forestry Forum, watershed residents, other organizations, the Nooksack and Lummi Tribes, and state and local elected officials. While these discussions have not expanded the scope of issues, they did broaden the initial set of alternatives to be considered by the Department.

Modeling Scenarios: One of the identified needs of this planning process is to preserve the economic viability of the state trust lands for the long-term benefit of the trust beneficiaries. In order to include this consideration into the draft alternatives, more information was needed about the potential economic outcomes from each approach.

The Committee advised DNR on the development of "modeling scenarios" that encompassed a range of management options. The economic implications of each scenario to trust revenues were then compared using DNR's sustainable harvest calculation modeling tools, before the formal alternatives were prepared. [See Appendix D, PDEIS-3.] The scenarios were built around the draft objectives developed earlier in conjunction with the Committee.

These modeling scenarios included:

1. A scenario with management strategies that will eventually become the "No Action" (no change) alternative. In this scenario, state trust lands in this landscape will be managed under DNR's Forest Resource Plan, DNR's Habitat Conservation Plan, and the Forest Practices Rules (as revised subsequent to the Forest & Fish Agreement). This alternative is also consistent with the Tier 3 alternative identified in DNR's statewide sustainable harvest calculation.
2. A scenario similar to the "No Action" scenario above, but with increased protection for unstable slopes and riparian areas as identified under SB6731.
3. A scenario similar to Scenario 2, with all elements of #2, but with increased protection to riparian areas, unstable slopes, wetlands; greater retention of older forest; and longer rotation periods for timber harvests.
4. A scenario similar to Scenario 3, all elements of #2 and #3, but with protections, retention and rotations all increased.

Formal landscape plan alternatives: The modeling results, along with the public scoping input received by DNR, were shared with the Committee, who then helped DNR draft the formal landscape plan alternatives presented in this PDEIS. DNR and the Committee developed the alternatives with the assistance of a professional facilitator contracted by DNR.

The alternatives presented in this PDEIS are part of an expanded scoping process. The analysis contained in the PDEIS and advice from the Committee, as well as public and tribal comments on the PDEIS, will help DNR refine the alternatives.

Draft EIS: DNR, with advice from the Committee, will refine the alternatives and develop a Draft Environmental Impact Statement (DEIS) that will identify a preferred alternative. Any element of a DEIS alternative that needs an interpretation or change to existing department policy will be brought to the attention of the Board of Natural Resources. If DNR and the Committee cannot agree on a preferred alternative, the DEIS will identify the preferred alternatives of the DNR and the Committee.

Final EIS: Both the PDEIS and the DEIS will be made available to agencies, Tribes, and other interested parties for review and input during formal comment periods. DNR will then prepare a response to comments, finalize the landscape plan alternatives, and issue the final EIS (FEIS).

Discussion of the phases of the proposal, their timing, and relationship to previous and future environmental analysis on this or related proposals (3.1.3.2)

The Department plans to use the input gained from expanded scoping through this PDEIS to develop a formal Draft EIS that will be released for public review around June 2003.

The Department expects to submit the final Lake Whatcom Landscape Plan Proposal and the final environmental impact statement (as an integrated product) to the Board of Natural Resources sometime around November 2003. Implementation of the Lake Whatcom Landscape Plan will follow approval of the Lake Whatcom Landscape Plan Proposal by the Board.

The Lake Whatcom Landscape Plan Proposal is being developed under the direction of the 1992 Forest Resource Plan, DNR's Habitat Conservation Plan, and 2000 Washington Laws Chapter 205. The Proposal builds on the analysis of the Final EIS for the Forest Resource Plan and Final EIS for DNR's Habitat Conservation Plan.

Specific management activities subject to SEPA review will continue to be responsive to SEPA rules and regulations. Site-specific harvest plans are subject to the SEPA process prior to sale.

Benefits and disadvantages of waiting to implement a landscape plan (3.1.3.3)

Implementation of the Lake Whatcom Landscape Plan will occur after public comment and the approval of the Board of Natural Resources. Once the plan is approved, there is no specific advantage in waiting to begin implementing the plan.

Alternatives 3, 4 and 5 do require DNR to complete a Memorandum of Understanding with the Lummi and Nooksack tribes before implementing the landscape plan.

Implementation will begin immediately after approval of the landscape plan with development of a final road maintenance and abandonment plan and a timber sale action plan that are consistent with the preferred alternative.

3.2 Description of the Alternatives

[Note: There will be no preferred alternative identified until the draft EIS.]

The Department has adopted the following objectives, developed with advice from the Committee, for the Lake Whatcom Landscape:

- Objective 1: Ensure no significant risk to public, health, safety and resources, and tribal archaeological and cultural resources from forest management related mass-wasting events.

- Objective 2: Maintain and restore the sediment regime within the range of natural variability.
- Objective 3: Protect and restore riparian and wetland habitat to sustain healthy native aquatic, wetland and riparian ecosystems.
- Objective 4: Maintain and restore the forest hydraulic regime for each sub-basin, within the range of natural variability.
- Objective 5: Maintain and restore water quality necessary to support healthy riparian, aquatic and wetland ecosystems.
- Objective 6: Maintain and restore a diversity of natural and managed functional habitat conditions to benefit native fish and wildlife species, particularly those identified in WDFW priority and habitat species (PHS).
- Objective 7: Permanently retain green trees, snags and down logs to support mature forest functions.
- Objective 8: Maintain or increase soil productivity and health.
- Objective 9: Preserve, protect and restore significant historic, archaeological, traditional current use and cultural resources.
- Objective 10: Provide and facilitate tribal access to state-managed lands for traditional cultural and religious practices and treaty-guaranteed hunting and gathering.
- Objective 11: Create and implement a sustained yield model specific to the Lake Whatcom watershed that encompasses the revised management standards and that is consistent with the sustained yield established by the Board of Natural Resources.
- Objective 12: Maintain or improve commercial forest productivity and health.
- Objective 13: Cultivate higher value commercial forest products.
- Objective 14: Develop and maintain a transportation network that facilitates commercial management activities.
- Objective 15: Maintain and increase lease revenue from existing and future communication sites.
- Objective 16: Consider opportunities to generate revenue from oil and gas exploration.
- Objective 17: Consider the marketing of special forest products such as evergreen boughs, salal greens, moss and native plants, as appropriate.
- Objective 18: Consider other revenue generating mechanisms.
- Objective 19: Manage dispersed, low impact recreation.
- Objective 20: Reduce the visual impact of forest management activities in high visibility areas as shown on Map S-1, Appendix D.
- Objective 21: Support stewardship education opportunities and partnerships that address community needs.

This PDEIS evaluates five (5) alternative sets of strategies for meeting these objectives. Each alternative is described below. Within each alternative, strategies that are not specifically restricted geographically or temporally will be applied across the landscape and across time.

All the strategies are designed to work together in meeting the multiple objectives; so strategies under one objective may also support other objectives (e.g., strategies for Objective 2 related to sediment also support Objective 5 related to water quality).

Objectives and strategies are not meant to over-ride one another unless the primacy of a particular strategy is specifically called out. For example, the strategy under Objective 17 specifically states that if special forest products are sold, DNR must ensure their sale “will not negatively impact other resource objectives or traditional tribal use.” Another example is the first strategy under Objective 1 in Alternative 5, where there will be “no timber harvest on all unstable slopes.” Aside from such exceptions, objectives and strategies are to be implemented as a whole to simultaneously achieve the multiple objectives of the landscape plan.

The key differences among the alternatives are highlighted at the beginning of each new alternative description. The alternatives are also shown in a side-by-side matrix in Appendix D; this was the working matrix used to develop the alternatives and may be a useful tool for comparing alternatives as well.

The objectives and strategies identified in the alternatives apply only to DNR-managed state trust lands. For example, Objective 2 “maintain and restore the sediment regime within the range of natural variability” is accompanied by strategies that will allow activities on state trust lands to contribute to meeting this objective, but do not carry full responsibility for meeting the objective on all ownerships within the entire Lake Whatcom watershed.

No Action (Alternative 1)

The No-Action Alternative incorporates the Department’s existing policies, procedures, legal requirements and management commitments, including but not limited to the Forest Resource Plan, Forest Practices Rules and Habitat Conservation Plan. This alternative is also consistent with the Tier 3 alternative identified in DNR’s statewide sustainable harvest calculation.

Objective 1	Ensure no significant risk to public health, safety and resources, and tribal archaeological and cultural resources from forest-management-related mass-wasting events.
Mass-wasting	<p>Strategies:</p> <ul style="list-style-type: none"> Follow Lake Whatcom Watershed Analysis mass-wasting prescriptions relating to timber harvesting. [See Map G-1 for location of mass-wasting units.] Proposed activities on potentially unstable slopes, as defined in the “Slope Stability Assessment,” that lie outside of the Watershed Analysis mass-wasting units will require on-site evaluation by a DNR specialist. <ul style="list-style-type: none"> Road reconstruction on areas identified by the above evaluation as unstable will consider specialists recommendations. In Smith Creek, large woody debris, which increases the risk of log jams and resulting debris torrents, will be cut into chunks to reduce debris build up, to provide for public safety of downstream residents.¹
Objective 2	Maintain and restore the sediment regime within the range of natural variability.
Roads & sediments	<p>Strategies:</p> <ul style="list-style-type: none"> Follow Forest Practice Rules and watershed analysis prescriptions for road construction and maintenance. <ul style="list-style-type: none"> No road construction during “wet conditions” (typically Nov. 1 – March 31) unless the contractor can demonstrate that protection of resources can be provided. Minimize new road construction using harvest systems planning No timber and rock hauling during “wet conditions” on DNR forest roads without surfacing or surfaced with non-durable rock, where sediment has the potential to deliver to streams. Develop and begin implementation of a road maintenance and abandonment plan based on the specifications in WAC-222-24-050 and 051, within one year of the completion and approval of the landscape plan. <ul style="list-style-type: none"> All orphaned roads will be inventoried and assessed relative to risk of failure and/or potential for sediment delivery. Mitigation work on orphaned roads will be done where a clear risk to public safety or potential for resource damage exists and accessing the site will not cause greater resource damage or public risk.
Objective 3	Protect and restore riparian and wetland habitat to sustain healthy native aquatic, wetland, and riparian ecosystems.
RMZs	<p>Strategies:</p> <ul style="list-style-type: none"> Establish riparian management zones while planning management activities. Manage lands within such zones to protect water quality and riparian habitat. <ul style="list-style-type: none"> Type 1, 2, and 3 waters shall have a designated riparian management zone with a minimum horizontal width (each side) equal to the 100-year-site-potential tree height or 100 feet, whichever is greater; timber harvest allowed per HCP and forestry handbook

¹ This strategy is based on a negotiated legal settlement between DNR and residents in this area.

Wetlands	<p>procedures. [Current procedures do not allow harvesting within riparian buffers. However, the HCP agreement anticipates that some harvesting will occur: (a) No timber harvest within the first 25 feet horizontal distance from the outer margin of the 100-year floodplain; (b) the next 75 feet of the riparian buffer shall be a minimal-harvest area, and (c) the remaining portion of the riparian buffer shall be a low-harvest area. The HCP provides performance goals for these three areas. Procedures to implement the HCP intent are still being developed.]</p> <ul style="list-style-type: none"> ○ Type 4 waters shall have a designated riparian management zone with a minimum horizontal width (each side) of 100 feet; timber harvest allowed per HCP and forestry handbook procedures. ○ The riparian management zone distance will be measured horizontally from the outer edge of the 100-year flood plain. ○ The width of the riparian management zone shall be increased to include an outer wind buffer, consistent with the HCP, on Type 1, 2, & 3 areas prone to windthrow. Where there is at least a moderate potential for windthrow, wind buffers shall be 100 feet wide on Type 1 & 2 waters and 50 feet wide on Type 3 waters that are wider than 5 feet. ● Provide forested wetland buffers on wetlands consistent with HCP riparian management strategy. <ul style="list-style-type: none"> ○ For wetlands greater than 1 acre in size, provide a wetland buffer equal in width to the 100-year-site-potential tree height or 100 feet, whichever is greater. ○ For wetlands greater than 0.25 acre and less than one acre, provide a 100-foot wetland buffer. ○ Ensure that timber harvest in forested portions of wetlands and wetland buffers perpetuate a windfirm stand with a minimum basal area of 120 square feet per acre.
Objective 4	Maintain and restore the forest hydraulic regime for each sub-basin within the range of natural variability.
Hydrologic maturity	<p>Strategies:</p> <ul style="list-style-type: none"> ● Follow Lake Whatcom watershed analysis prescriptions relating to hydrologic maturity in rain-on-snow zones: <ul style="list-style-type: none"> ○ Maintain a minimum of (692) acres of hydrologically mature (> 40 years) forest in the Olsen Creek sub-basin. ○ Maintain a minimum of (1,200) acres of hydrologically mature (> 40 years) forest in the Smith Creek sub-basin.
Objective 5	Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.
Chemicals	<p>Strategies:</p> <ul style="list-style-type: none"> ● Follow Forest Practice Rules and Forest Resource Plan Policy No. 33 (Controlling Competing Vegetation). Use the following prioritized application methods: 1) no treatment, 2) non-chemical, 3) ground-applied, and 4) aerial-applied. Select a cost effective method by considering the no treatment method first and then moving sequentially down the list. ● Follow Forest Practice Rules and Forest Resource Plan Policy No. 33 (Controlling Competing Vegetation) and 34 (Thinning, Fertilizing, and Pruning). Use prioritized application method listed in Strategy 5.1.
Objective 6	Maintain and restore a diversity of natural and managed functional habitat conditions to benefit native fish and wildlife species, particularly those identified in WDFW priority and habitat species (PHS).
Fish habitat	<p>Strategies:</p> <ul style="list-style-type: none"> ● Ensure all native fish species have access throughout their natural range at all life stages. <ul style="list-style-type: none"> ○ Identify, prioritize, and replace fish-blocking culverts with fish-passage structures. Replacement will occur during planned management activities or during implementation of the Road Maintenance & Abandonment Plan.
Older-forest conditions	<ul style="list-style-type: none"> ● Retain riparian and wetland buffers and off-base unstable slope areas in older forest conditions, letting those not in that condition yet to grow into it.

Bald eagles	<ul style="list-style-type: none"> Protect all known bald eagle nesting, roosting and foraging sites. <ul style="list-style-type: none"> Follow Forestry Handbook Procedure PR 14-004-330 for protecting bald eagle nest sites and roosts, including the development of site-management plans for bald eagle habitat pursuant to Forest Practices Regulations (WAC 232-12-292). Follow the HCP riparian and large, structurally unique tree retention strategies, which should result in increased abundance of large trees for bald eagle nesting and roosting.
Marbled murrelet	<ul style="list-style-type: none"> Conduct Pacific Seabird Group (PSG) protocol surveys of all known reclassified marbled murrelet habitat to determine occupancy. <ul style="list-style-type: none"> Protect occupied stands and develop a long-term conservation strategy for the North Puget Planning Unit, as required in the HCP.
Unlisted species of concern	<ul style="list-style-type: none"> Follow specific species-by-species Forestry Handbook procedures. The following unlisted species of concern have been identified in Table XX as existing in or near the Lake Whatcom landscape and have Forestry Handbook procedures in place. Where current procedures do not exist, consult with the Region wildlife biologist. <ul style="list-style-type: none"> Common Loon – see Forestry Handbook Procedure PR 14-004-240: Protecting Common Loon Nests. Northern Goshawk – see Forestry Handbook Procedure PR 14-004-260: Protecting Northern Goshawk Nests West of the Cascades. Pileated Woodpecker – see Forestry Handbook Procedure PR 14-004-290; Protecting Pileated Woodpecker Nests.
Uncommon habitats	<ul style="list-style-type: none"> Follow specific Forestry Handbook Procedures. The following uncommon habitats have procedures: <ul style="list-style-type: none"> Cliffs – see Forestry Handbook Procedure PR 14-004-190: Protecting Cliffs. Talus Fields – see Forestry Handbook Procedure PR 14-004-170: Protecting Talus Field. Caves – see Forestry Handbook Procedure PR 14-004-180: Protecting Caves. Balds – see Forestry Handbook Procedure PR 14-004-220: Protecting Balds.
Objective 7	Permanently retain green trees, snags, & down logs to support mature forest functions.
Snags, green trees, down wood	<p>Strategies:</p> <ul style="list-style-type: none"> Implement the following snag and green tree retention procedures on all harvest units, consistent with PR-14-006-090: <ul style="list-style-type: none"> Retain seven (7) percent of all trees that are 12” dbh or larger or 8 trees per acre, whichever is greater, as permanent legacy trees. Legacy trees shall be dominant and co-dominant trees Legacy trees shall include at least five windfirm green trees and three snags per acre harvested (subject to Dept. of Labor and Industries safety standards) Choose as legacy trees, large trees with structural characteristics important to wildlife and old growth remnants One of these trees must be from the largest diameter class One additional tree must be from the dominant crown class Leave snags whenever safe and practicable. Retain snags that are at least 15”dbh and 30’ tall. Give priority to large hollow snags, hard snags with bark, and snags that are at least 20” dbh and 40’ tall. If fewer than three snags per acre can be left, additional live trees will be retained so that the average per acre equals 7 percent or 8 trees per acre, whichever is greater.
Objective 8	Maintain or increase soil productivity and health.
Snags	<p>Strategies:</p> <ul style="list-style-type: none"> Implement the strategies for snag and green tree retention above.
Harvest methods	<ul style="list-style-type: none"> Select harvest methods that maintain or facilitate establishment of productive and healthy forest stands. Avoid using ground-based harvesting systems on slopes exceeding 30% and on soils sensitive to compaction.

Objective 9	Preserve, protect, and restore significant historic, archeological, traditional current use and cultural resources.
References	<p>Strategies:</p> <ul style="list-style-type: none"> • Identify and protect cultural resources using the following DNR policies, procedures, and guidelines, as well as state and federal acts, rules, regulations, accords, agreements, and executive orders. <ul style="list-style-type: none"> ○ Implement DNR Policy P006-001 <u>Historical, Cultural and Archaeological Sites, 7/31/96</u>: “All department personnel will identify potential archaeological, historic and cultural sites/resources in the course of their normal duties. Discovered resources will be recorded and inventoried in coordination with the Office of Archaeological and Historic Preservation (OAHP) and/or the appropriate Tribes so that they can be protected to the full extent allowable by law. ○ It is the policy of the department that Forest Resource Plan Policy #24 “Identifying Historic Sites,” shall apply to all department managed lands. That policy states “The department will establish a program to identify and inventory historic and archaeological sites and protect them at a level, which, at a minimum, meets regulatory requirements....” ○ DNR Tribal Policy PO06-002, Jan. 16, 1991 as referenced in Appendix F of the 1992 Forest Resource Plan, in PO06-001, and as reflected in the Revised DNR Tribal Policy, June 1998. ○ 1992 DNR Forest Resource Plan: Policy #8 “Special Forest Products”; Policy #13 “Special Ecological Features”; Policy #16 “Landscape Planning”; Policy #19 “Watershed Analysis”; Implement Policy #24: “Historic and Archaeological Sites”: “The department will establish a program to identify and inventory historic and archaeological sites and protect them at a level which, at a minimum, meets regulatory requirements.” Policy #28 “Developing and Maintaining Roads”; Policy #35 “Implementation Policies: Public Involvement”: “The department will solicit comment from the public, tribes, and government agencies when implementing the Forest Resource Plan and when revising policies contained in the document.” ○ DNR Forestry Handbook Procedures: PR 14-004-030 “Identifying Historic Sites”; PR 14-004-010 “Identifying Off-base Lands”; PR 14-004-110 “Wetland Management”. ○ DNR Final Habitat Conservation Plan (September 1997) and by reference: (1) DNR DEIS (March 22, 1996), 4.9 Cultural Resources, pgs. 4-525-4-528; and (2) DNR HCP FEIS (October 25, 1996), p. 3-121 C. Cultural. ○ Washington State Rules, Regulations, Agreements: RCW 27.34 <u>Archaeological and Historic Preservation</u>; RCW 27.44 <u>Indian Graves and Records</u>; RCW 27.53 <u>Archaeological Sites and Resources Act</u>; RCW 43.21C.020 & WAC 197-11 <u>State Environmental Policy Act</u>; RCW 25 <u>Office of Archaeology and Historic Preservation</u>; RCW 76.09 <u>Forest Practices Act</u>; WAC 222 <u>Forest Practices Rules</u>; <u>1999 Forest & Fish Plan</u> Appendices G: Cultural Resource Module, N2: DNR Cultural Resources Planning, O: Cultural Resources Management & Protection Plan; <u>1987 TFW Agreement</u>; <u>1989 Centennial Accord</u>. ○ Federal Regulations/Laws/Executive Orders: 36 CFR Part 800 Protection of Historic Properties; 42 U.S.C. AIRFA American Indian Religious Freedom Act; 33 U.S.C Clean Water Act; 16 USC Endangered Species Act; Title 16 U.S.C 1906 Antiquities Act; Title 16 U.S.C., PL 96-95 Archaeological Resources Protection Act of 1979; PL 101-601 Native American Graves Protection and Repatriation Act; PL 91-190 National Environmental Policy Act, as applicable to DNR HCP; 1971 Executive Order #11593 Protection and Enhancement of the Cultural Environment.

Database	<ul style="list-style-type: none"> Use the DNR Planning and Tracking (P&T) System, which links the user to DNR's Total Resource Application Cross-Reference (TRAX) database system, prior to planning resource management activities to identify known Cultural Resources Sites, per DNR PR14-004-030 "Identifying Historic Sites".
Meetings	<ul style="list-style-type: none"> When management activities involve or affect cultural resources, DNR will meet with the affected tribe(s) with the objective of agreeing to a plan for protecting the archeological or cultural value. (per WAC 222-20-120) DNR will meet regularly with the affected tribe(s) to discuss plans or management activities per PO06-002 Tribal Relations Policy, January 16, 1991 and June 2, 1998)
Objective 10	Provide and facilitate tribal access to state managed lands for traditional cultural and religious practices and treaty guaranteed hunting and gathering.
Access	<p>Strategies:</p> <ul style="list-style-type: none"> Tribal use is provided for by Policy No. PO10-002 (Public Use on DNR-Managed Trust Lands), provided resources and assets are not at risk. Tribal access for hunting, fishing and gathering per Point Elliott Treaty of 1855 Section 5 Open and unclaimed lands.
Objective 11	Create and implement a sustained yield model specific to the Lake Whatcom watershed that encompasses the revised management standards and that is consistent with the sustained yield established by the Board of Natural Resources.
Rotation age Thinning	<p>Strategies:</p> <ul style="list-style-type: none"> The average rotation age is consistent with Forest Resource Plan policy as specified by site and species – generally averaging 60 years. Harvest trees in dense stands (commercial thinning), before trees die from stand competition, to capture revenue that would otherwise be lost.
Objective 12	Maintain or improve commercial forest productivity and health.
	<p>Strategies:</p> <ul style="list-style-type: none"> Select a harvest method that maintains or facilitates establishment of productive and healthy forest stands. Avoid using ground-based harvesting systems on slopes exceeding 30% and on soils sensitive to compaction. Following regeneration harvests, reforest with a majority of Douglas-fir intermixed with western redcedar at all elevations in the planning area. Pre-commercially thin overstocked stands. During the first two decades of the plan, accelerate the harvest of mature and over-mature hardwood stands on sites better suited for conifers. Control competing vegetation that would dominate crop trees or significantly inhibit growth in a stand.
Objective 13	Cultivate higher value commercial forest products.
	<p>Strategies:</p> <ul style="list-style-type: none"> Plant and encourage growth of western redcedar to develop pole products. Prune, to increase wood quality, where it will generate a higher economic return. Consider tree selection during commercial thinning that promotes future log quality.
Objective 14	Develop and maintain a transportation network that facilitates commercial management activities.
	<p>Strategies:</p> <ul style="list-style-type: none"> Develop and begin implementation of a Road Maintenance and Abandonment Plan within one year of the completion and approval of the landscape plan.

	<ul style="list-style-type: none"> • Use harvest system planning to identify necessary roads and reduce the total length of new road construction. • Abandon roads to Forest Practices standards when they are no longer needed for management. • Install and maintain gates where necessary to reduce road maintenance costs, resource impacts, vandalism, and garbage dumping.
Objective 15	Maintain and increase lease revenue from existing and future communication sites.
	Strategies: <ul style="list-style-type: none"> • Continue to lease tower and building space to interested parties. • When possible, review rental rates. Increase rates if market conditions allow. • Seek new communication site customers.
Objective 16	Consider opportunities to generate revenue from oil and gas exploration.
	Strategies: <ul style="list-style-type: none"> • Limit exploratory drill sites to surface locations outside the watershed. Subsurface diagonal drilling allowed. • If sufficient oil or gas reserves are found, allow development of the resource if compatible with other landscape objectives.
Objective 17	Consider the marketing of special forest products such as evergreen boughs, salal greens, moss, and native plants, as appropriate.
	Strategies: <ul style="list-style-type: none"> • Ensure potential products, if sold, will not negatively impact other resource objectives or traditional tribal use.
Objective 18	Consider other revenue generating mechanisms.
	<p><i>The department has been researching the following revenue mechanisms. However, since none of these are active at the present, they are not part of the “baseline” assumed for Alternative 1 when comparing income among the alternatives in Section 4.</i></p> <ul style="list-style-type: none"> • Green certification • Carbon sequestration • Lease(s) • Conservation easement • Reconveyance • Exchange or sell trust lands.
Objective 19	Manage dispersed, low impact recreation.
	Strategies: <ul style="list-style-type: none"> • Public use and recreation is allowed in accordance with Policy No. PO10-002 (Public Use on DNR-Managed Trust Lands), provided resources and assets are not at risk. • As budget allows, develop a comprehensive recreation plan in cooperation with specific user groups such as the horseback riders, mountain bikers, hikers and other interested parties that minimizes impacts to trust resources and assets. • Limit access to streams, riparian areas, and wetlands by motorized vehicles through permanent road closures, vehicle barriers, and public education and enforcement.
Objective 20	Reduce the visual impact of forest management activities in high visibility areas as shown on Map S-1.
	Strategies: <ul style="list-style-type: none"> • Follow Forest Practice Regulations and Forest Resource Policy No. 32 (Green-up of Harvest Units), in conjunction with Policy No. 16 (Landscape Planning). • On all the state trust lands, including “moderate visibility” areas on Map S-1, the following guidelines will be used for even-aged harvest units:

	<ul style="list-style-type: none"> ○ Harvest units will not exceed 100 acres except in the case of emergency salvage operations due to extensive "blowdown", insect or disease infestation, or public safety concern. ○ No harvesting within 300 feet of another harvest area if combined acreage of harvest areas exceeds 100 acres ○ Harvest units with trees greater than 4 feet high are considered "greened-up." ● In "high visibility" areas on Map S-1, the department will consider the size, shape, and location of harvest units and distribution of leave trees when planning timber sales.
Objective 21	Support stewardship education opportunities and partnerships that address community needs.
	<p><i>Strategies:</i></p> <ul style="list-style-type: none"> ● Cooperate with and provide educational opportunities to requesting educational institutions and other interested parties consistent with the department's public use policy No. PO10-002. ● DNR will continue to be an active participant in the Forest Practices Timber Fish Wildlife (TFW) process and the Lake Whatcom Forestry Forum.

Alternative 2²:

Alternative 2 adds the legislative requirements in ESSB 6731 to the No Action alternative. These additions can be found under Objective 1 (unstable slopes) and Objective 3 (riparian areas and wetlands). The additions are highlighted in *italic* text. Also adds recreational fees as a revenue mechanism to consider.

Table 3: Alternative 2

Objective 1	Ensure no significant risk to public health, safety and resources, and tribal archaeological and cultural resources from forest-management-related mass-wasting events.
Mass-wasting	<p><i>Strategies:</i></p> <ul style="list-style-type: none"> • <i>Timber harvest and road construction upon potentially unstable slopes (as defined in the “Slope Stability Assessment” and shown generally on Map G-2 “Potentially Unstable Slopes”) shall be carefully regulated.</i> <ul style="list-style-type: none"> ○ <i>Proposed activities on potentially unstable slopes shall be reviewed by the inter-jurisdictional committee who may make site specific recommendations.</i> ○ <i>Proposed activities on potentially unstable slopes will require on-site evaluation by a DNR specialist to determine actual unstable areas.</i> ○ <i>No road construction or timber harvesting will occur on areas identified during the above evaluation as unstable.</i> ○ <i>Road reconstruction on areas identified by the above evaluation as unstable will consider inter-jurisdictional committee and specialists recommendations.</i> ○ <i>Harvesting or road construction outside of identified unstable areas, but within the mapped “potentially unstable slopes”, will consider inter-jurisdictional committee and specialists recommendations.</i> • <i>Slope stability assessment work generally identified “high hazard” and “moderate hazard” mass-wasting units (See Map G-1) within the potentially unstable slopes areas. Watershed Analysis Areas of Resource Sensitivity #1 is rated “moderate hazard”; ARS #2, 3 and 4 are rated “high hazard.”</i> <ul style="list-style-type: none"> ○ <i>Proposed activities on potentially unstable slopes shall be reviewed by the inter-jurisdictional committee who may make site specific recommendations.</i> ○ <i>Follow Lake Whatcom Watershed Analysis mass-wasting prescriptions relating to timber harvesting.</i> ○ <i>On unstable slopes in ARS #2, #3 and #4 or areas identified as unstable above, new road construction shall be prohibited and old road reconstruction shall be limited. .</i> ○ <i>Follow Watershed Analysis prescription for road construction in ARS #1.</i> ○ <i>Existing road reconstruction will follow Watershed Analysis road construction prescriptions in ARS #1, 2, 3 and 4.</i> • <i>In Smith Creek, large woody debris, which increases the risk of log jams and resulting debris torrents, will be cut into chunks to reduce debris build up, to provide for public safety of downstream residents.³</i>

² All strategies must be consistent with appropriate cultural resources and tribal relations strategies under Objectives 9 and 10.

³ This strategy is based on a negotiated legal settlement between DNR and residents in this area.

Objective 2	Maintain and restore the sediment regime within the range of natural variability.
Roads & sediments	<p>Strategies:</p> <ul style="list-style-type: none"> Follow Forest Practice Rules and watershed analysis prescriptions for road construction and maintenance. <ul style="list-style-type: none"> No road construction during “wet conditions” (typically Nov. 1 – March 31) unless the contractor can demonstrate that protection of resources can be provided. Minimize new road construction using harvest systems planning No timber and rock hauling during “wet conditions” on DNR forest roads without surfacing or surfaced with non-durable rock, where sediment has the potential to deliver to streams. Develop and begin implementation of a road maintenance and abandonment plan based on the specifications in WAC-222-24-050 and 051, within one year of the completion and approval of the landscape plan. <ul style="list-style-type: none"> All orphaned roads will be inventoried and assessed relative to risk of failure and/or potential for sediment delivery. Mitigation work on orphaned roads will be done where a clear risk to public safety or potential for resource damage exists and accessing the site will not cause greater resource damage or public risk.
Objective 3	Protect and restore riparian and wetland habitat to sustain healthy native aquatic, wetland, and riparian ecosystems.
RMZs	<p>Strategies:</p> <ul style="list-style-type: none"> Establish riparian management zones <i>along all streams</i> while planning management activities. Manage lands within such zones to protect water quality and riparian habitat. <i>Activities proposed within riparian management zones and wetlands shall be reviewed by the inter-jurisdictional committee, which may make site-specific recommendations.</i> <ul style="list-style-type: none"> Type 1, 2, and 3 waters shall have a designated riparian management zone with a minimum horizontal width (each side) equal to the 100-year-site-potential tree height or 100 feet, whichever is greater; timber harvest allowed per HCP and forestry handbook procedures. [Current procedures do not allow harvesting within riparian buffers. However, the HCP agreement anticipates that some harvesting will occur: (a) No timber harvest within the first 25 feet horizontal distance from the outer margin of the 100-year floodplain; (b) the next 75 feet of the riparian buffer shall be a minimal-harvest area, and (c) the remaining portion of the riparian buffer shall be a low-harvest area. The HCP provides performance goals for these three areas. Procedures to implement the HCP intent are still being developed.]
Wetlands	<ul style="list-style-type: none"> Type 4 waters shall have a designated riparian management zone with a minimum horizontal width (each side) of 100 feet; timber harvest allowed per HCP and forestry handbook procedures. Type 5 waters shall have a designated riparian management zone with a minimum horizontal width (each side) of 33 feet. No timber harvests shall occur in type 5 riparian management zones except as needed for roads and yarding corridors. Trees cut for yarding corridors through type 5 riparian management zones shall be retained as down wood. The riparian management zone distance will be measured horizontally from the outer edge of the 100-year flood plain. The width of the riparian management zone shall be increased to include an outer wind buffer, consistent with the HCP, on Type 1, 2, & 3 areas prone to wind-throw. Where there is at least a moderate potential for windthrow, wind buffers shall be 100 feet wide on Type 1 & 2 waters and 50 feet wide on Type 3 waters that are wider than 5 feet. Provide forested wetland buffers on wetlands consistent with HCP riparian management strategy. <ul style="list-style-type: none"> For wetlands greater than 1 acre in size, provide a wetland buffer equal in width to the 100-year-site-potential tree height or 100 feet, whichever is greater. For wetlands greater than 0.25 acre and less than one acre, provide a 100-foot wetland buffer.

	<ul style="list-style-type: none"> ○ Ensure that timber harvest in forested portions of wetlands and wetland buffers perpetuate a wind-firm stand with a minimum basal area of 120 square feet per acre.
Objective 4	Maintain and restore the forest hydraulic regime for each sub-basin within the range of natural variability.
Hydrologic maturity	<p>Strategies:</p> <ul style="list-style-type: none"> • Follow Lake Whatcom watershed analysis prescriptions relating to hydrologic maturity in rain-on-snow zones: <ul style="list-style-type: none"> ○ Maintain a minimum of (692) acres of hydrologically mature (> 40 years) forest in the Olsen Creek sub-basin. ○ Maintain a minimum of (1,200) acres of hydrologically mature (> 40 years) forest in the Smith Creek sub-basin.
Objective 5	Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.
Chemicals	<p>Strategies:</p> <ul style="list-style-type: none"> • Follow Forest Practice Rules and Forest Resource Plan Policy No. 33 (Controlling Competing Vegetation). Use the following prioritized application methods: 1) no treatment, 2) non-chemical, 3) ground-applied, and 4) aerial-applied. Select a cost effective method by considering the no treatment method first and then moving sequentially down the list. • Follow Forest Practice Rules and Forest Resource Plan Policy No. 33 (Controlling Competing Vegetation) and 34 (Thinning, Fertilizing, and Pruning). Use prioritized application method listed in Strategy 5.1.
Objective 6	Maintain and restore a diversity of natural and managed functional habitat conditions to benefit native fish and wildlife species, particularly those identified in WDFW priority and habitat species (PHS).
Fish habitat Older-forest conditions Bald eagles Marbled murrelet Unlisted species of concern	<p>Strategies:</p> <ul style="list-style-type: none"> • Ensure all native fish species have access throughout their natural range at all life stages. <ul style="list-style-type: none"> ○ Identify, prioritize, and replace fish-blocking culverts with fish-passage structures. Replacement will occur during planned management activities or during implementation of the Road Maintenance & Abandonment Plan. • Retain riparian and wetland buffers and off-base unstable slope areas in older forest conditions, letting those not in that condition yet to grow into it. • Protect all known bald eagle nesting, roosting and foraging sites. <ul style="list-style-type: none"> ○ Follow Forestry Handbook Procedure PR 14-004-330 for protecting bald eagle nest sites and roosts, including the development of site-management plans for bald eagle habitat pursuant to Forest Practices Regulations (WAC 232-12-292). ○ Follow the HCP riparian and large, structurally unique tree retention strategies, which should result in increased abundance of large trees for bald eagle nesting and roosting. • Conduct Pacific Seabird Group (PSG) protocol surveys of all known reclassified marbled murrelet habitat to determine occupancy. <ul style="list-style-type: none"> ○ Protect occupied stands and develop a long-term conservation strategy for the North Puget Planning Unit, as required in the HCP. • Follow specific species-by-species Forestry Handbook procedures. The following unlisted species of concern have been identified in Table XX as existing in or near the Lake Whatcom landscape and have Forestry Handbook procedures in place. Where current procedures do not exist, consult with the Region wildlife biologist. <ul style="list-style-type: none"> ○ Common Loon – see Forestry Handbook Procedure PR 14-004-240: Protecting Common Loon Nests. ○ Northern Goshawk – see Forestry Handbook Procedure PR 14-004-260: Protecting Northern Goshawk Nests West of the Cascades. ○ Pileated Woodpecker – see Forestry Handbook Procedure PR 14-004-290; Protecting Pileated Woodpecker Nests.

Uncommon habitats	<ul style="list-style-type: none"> Follow specific Forestry Handbook Procedures. The following uncommon habitats have procedures: <ul style="list-style-type: none"> Cliffs – see Forestry Handbook Procedure PR 14-004-190: Protecting Cliffs. Talus Fields – see Forestry Handbook Procedure PR 14-004-170: Protecting Talus Field. Caves – see Forestry Handbook Procedure PR 14-004-180: Protecting Caves. Balds – see Forestry Handbook Procedure PR 14-004-220: Protecting Balds.
Objective 7	Permanently retain green trees, snags, & down logs to support mature forest functions.
Snags, green trees, down wood	<p>Strategies:</p> <ul style="list-style-type: none"> Implement the following snag and green tree retention procedures on all harvest units, consistent with PR-14-006-090: <ul style="list-style-type: none"> Retain seven (7) percent of all trees that are 12” dbh or larger or 8 trees per acre, whichever is greater, as permanent legacy trees. Legacy trees shall be dominant and co-dominant trees Legacy trees shall include at least five windfirm green trees and three snags per acre harvested (subject to Dept. of Labor and Industries safety standards) Choose as legacy trees large trees with structural characteristics important to wildlife and old growth remnants One of these trees must be from the largest diameter class One additional tree must be from the dominant crown class Leave snags whenever safe and practicable. Retain snags that are at least 15"dbh and 30' tall. Give priority to large hollow snags, hard snags with bark, and snags that are at least 20” dbh and 40’ tall. If fewer than three snags per acre can be left, additional live trees will be retained so that the average per acre equals 7 percent or 8 trees per acre, whichever is greater. .
Objective 8	Maintain or increase soil productivity and health.
Snags	<p>Strategies:</p> <ul style="list-style-type: none"> Implement the strategies for snag and green tree retention above.
Harvest methods	<ul style="list-style-type: none"> Select harvest methods that maintain or facilitate establishment of productive and healthy forest stands. Avoid using ground-based harvesting systems on slopes exceeding 30% and on soils sensitive to compaction.
Objective 9	Preserve, protect, and restore significant historic, archeological, traditional current use and cultural resources.
	<p>Strategies:</p> <ul style="list-style-type: none"> Identify and protect cultural resources using the following DNR policies, procedures, and guidelines, as well as state and federal acts, rules, regulations, accords, agreements, and executive orders. <ul style="list-style-type: none"> Implement DNR Policy P006-001 <u>Historical, Cultural and Archaeological Sites, 7/31/96:</u> “All department personnel will identify potential archaeological, historic and cultural sites/resources in the course of their normal duties. Discovered resources will be recorded and inventoried in coordination with the Office of Archaeological and Historic Preservation (OHAP) and/or the appropriate Tribes so that they can be protected to the full extent allowable by law. It is the policy of the department that Forest Resource Plan Policy #24 “Identifying Historic Sites,” shall apply to all department managed lands. That policy states “The department will establish a program to identify and inventory historic and archaeological sites and protect them at a level, which, at a minimum, meets regulatory requirements....” DNR Tribal Policy PO06-002, Jan. 16, 1991 as referenced in Appendix F of the 1992 Forest Resource Plan, in PO06-001, and as reflected in the Revised DNR Tribal Policy, June 1998. 1992 DNR Forest Resource Plan: Policy #8 “Special Forest Products”; Policy #13 “Special Ecological Features”; Policy #16

	<p>“Landscape Planning”; Policy #19 “Watershed Analysis”; Implement Policy #24: “Historic and Archaeological Sites”: “The department will establish a program to identify and inventory historic and archaeological sites and protect them at a level which, at a minimum, meets regulatory requirements.” Policy #28 “Developing and Maintaining Roads”; Policy #35 “Implementation Policies: Public Involvement”: “The department will solicit comment from the public, tribes, and government agencies when implementing the Forest Resource Plan and when revising policies contained in the document.”</p> <ul style="list-style-type: none"> ○ DNR Forestry Handbook Procedures: PR 14-004-030 “Identifying Historic Sites”; PR 14-004-010 “Identifying Off-base Lands”; PR 14-004-110 “Wetland Management”. ○ DNR Final Habitat Conservation Plan (September 1997) and by reference: (1) DNR DEIS (March 22, 1996), 4.9 Cultural Resources, pgs. 4-525-4-528; and (2) DNR HCP FEIS (October 25, 1996), p. 3-121 C. Cultural. ○ Washington State Rules, Regulations, Agreements: RCW 27.34 <u>Archaeological and Historic Preservation</u>; RCW 27.44 <u>Indian Graves and Records</u>; RCW 27.53 <u>Archaeological Sites and Resources Act</u>; RCW 43.21C.020 & WAC 197-11 <u>State Environmental Policy Act</u>; RCW 25 <u>Office of Archaeology and Historic Preservation</u>; RCW 76.09 <u>Forest Practices Act</u>; WAC 222 <u>Forest Practices Rules</u>; <u>1999 Forest & Fish Plan</u> Appendices G: Cultural Resource Module, N2: DNR Cultural Resources Planning, O: Cultural Resources Management & Protection Plan; <u>1987 TFW Agreement</u>; <u>1989 Centennial Accord</u>. ○ Federal Regulations/Laws/Executive Orders: 36 CFR Part 800 <u>Protection of Historic Properties</u>; 42 U.S.C. <u>AIRFA American Indian Religious Freedom Act</u>; 33 U.S.C <u>Clean Water Act</u>; 16 USC <u>Endangered Species Act</u>; Title 16 U.S.C 1906 <u>Antiquities Act</u>; Title 16 U.S.C., PL 96-95 <u>Archaeological Resources Protection Act of 1979</u>; PL 101-601 <u>Native American Graves Protection and Repatriation Act</u>; PL 91-190 <u>National Environmental Policy Act</u>; as applicable to DNR HCP; 1971 Executive Order #11593 <u>Protection and Enhancement of the Cultural Environment</u>.
	<p>Strategies (cont) :</p> <ul style="list-style-type: none"> • Use the DNR Planning and Tracking (P&T) System, which links the user to DNR’s Total Resource Application Cross-Reference (TRAX) database system, prior to planning resource management activities to identify known Cultural Resources Sites, per DNR PR14-004-030 “Identifying Historic Sites”. • When management activities involve or affect cultural resources, DNR will meet with the affected tribe(s) with the objective of agreeing to a plan for protecting the archeological or cultural value. (per WAC 2222-20-120) • DNR will meet regularly with the affected tribe(s) to discuss plans or management activities per PO06-002 Tribal Relations Policy, January 16, 1991 and June 2, 1998)
Objective 10	Provide and facilitate tribal access to state managed lands for traditional cultural and religious practices and treaty guaranteed hunting and gathering.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Tribal use is provided for by Policy No. PO10-002 (Public Use on DNR-Managed Trust Lands), provided resources and assets are not at risk. • Tribal access for hunting, fishing and gathering per Point Elliott Treaty of 1855 Section 5 Open and unclaimed lands.
Objective 11	Create and implement a sustained yield model specific to the Lake Whatcom watershed that encompasses the revised management standards and that is consistent with the sustained yield established by the Board of Natural Resources.
	<p>Strategies:</p> <ul style="list-style-type: none"> • The average rotation age is consistent with Forest Resource Plan policy as specified by site and species – generally averaging 60 years. • Harvest trees in dense stands (commercial thinning), before trees die from stand competition, to capture revenue that would otherwise be lost.

Objective 12	Maintain or improve commercial forest productivity and health.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Select a harvest method that maintains or facilitates establishment of productive and healthy forest stands. • Avoid using ground-based harvesting systems on slopes exceeding 30% and on soils sensitive to compaction. • Following regeneration harvests, reforest with a majority of Douglas-fir intermixed with Western redcedar at all elevations in the planning area. • Pre-commercially thin overstocked stands. • During the first two decades of the plan, accelerate the harvest of mature and over-mature hardwood stands on sites better suited for conifers. • Control competing vegetation that would dominate crop trees or significantly inhibit growth in a stand.
Objective 13	Cultivate higher value commercial forest products.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Plant and encourage growth of western redcedar to develop pole products. • Prune, to increase wood quality, where it will generate a higher economic return. • Consider tree selection during commercial thinning that promotes future log quality.
Objective 14	Develop and maintain a transportation network that facilitates commercial management activities.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Develop and begin implementation of a Road Maintenance and Abandonment Plan within one year of the completion and approval of the landscape plan. • Use harvest system planning to identify necessary roads and reduce the total length of new road construction. • Abandon roads to Forest Practices standards when they are no longer needed for management. • Install and maintain gates where necessary to reduce road maintenance costs, resource impacts, vandalism, and garbage dumping.
Objective 15	Maintain and increase lease revenue from existing and future communication sites.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Continue to lease tower and building space to interested parties. • When possible, review rental rates. Increase rates if market conditions allow. • Seek new communication site customers.
Objective 16	Consider opportunities to generate revenue from oil and gas exploration.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Limit exploratory drill sites to surface locations outside the watershed. Subsurface diagonal drilling allowed. • If sufficient oil or gas reserves are found, allow development of the resource if compatible with other landscape objectives.
Objective 17	Consider the marketing of special forest products such as evergreen boughs, salal greens, moss, and native plants, as appropriate.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Ensure potential products, if sold, will not negatively impact other resource objectives or traditional tribal use.

Objective 18	Consider other revenue generating mechanisms.
	Strategies: <ul style="list-style-type: none"> • Green certification • Carbon sequestration • Lease(s) • Conservation easement • Reconveyance • Exchange or sell trust lands <i>consistent with the respective alternative.</i> • <i>Recreational fees.</i>
Objective 19	Manage dispersed, low impact recreation.
	Strategies: <ul style="list-style-type: none"> • Public use and recreation is allowed in accordance with Policy No. PO10-002 (Public Use on DNR-Managed Trust Lands), provided resources and assets are not at risk. • As budget allows, develop a comprehensive recreation plan in cooperation with specific user groups such as the horseback riders, mountain bikers, hikers and other interested parties that minimizes impacts to trust resources and assets. • Limit access to streams, riparian areas, and wetlands by motorized vehicles through permanent road closures, vehicle barriers, and public education and enforcement.
Objective 20	Reduce the visual impact of forest management activities in high visibility areas as shown on Map S-1.
	Strategies: <ul style="list-style-type: none"> • Follow Forest Practice Regulations and Forest Resource Policy No. 32 (Green-up of Harvest Units), in conjunction with Policy No. 16 (Landscape Planning). • On all the state trust lands, including “moderate visibility” areas on Map S-1, the following guidelines will be used for even-aged harvest units: <ul style="list-style-type: none"> ○ Harvest units will not exceed 100 acres except in the case of emergency salvage operations due to extensive "blowdown", insect or disease infestation, or public safety concern. ○ No harvesting within 300 feet of another harvest area if combined acreage of harvest areas exceeds 100 acres ○ Harvest units with trees greater than 4 feet high are considered “greened-up.” • In “high visibility” areas on Map S-1, the department will consider the size, shape, and location of harvest units and distribution of leave trees when planning timber sales.
Objective 21	Support stewardship education opportunities and partnerships that address community needs.
	Strategies: <ul style="list-style-type: none"> • Cooperate with and provide educational opportunities to requesting educational institutions and other interested parties consistent with the department’s public use policy No. PO10–002. • DNR will continue to be an active participant in the Forest Practices Timber Fish Wildlife (TFW) process and the Lake Whatcom Forestry Forum.

Alternative 3⁴:

This alternative was developed by the Committee as the first of two options to Alternative 2. It was developed to provide a range of options to be considered, not as a Committee-preferred alternative. Alternative 3 differs from Alternative 2, primarily by:

- adding buffers adjacent to unstable slopes, riparian areas;
- widening wetland buffers;
- limiting harvest in some areas to no harvest, or to thinning only;
- further limiting road construction locations and stream crossings allowances;
- setting time limits for treating high-risk roads and fish blockages;
- increasing riparian zone and riparian buffer widths;
- increasing the percent of the forest that must be hydrologically mature in each sub-basin;
- increasing the average rotation age;
- limiting chemical application options;
- expanding on HCP guidelines for managing wildlife habitat to incorporate WDFW PHS management guidelines;
- increasing snag and green tree retention;
- not allowing surface drilling for oil and gas; and
- adding a Cultural Resource Management Plan, and interim Memorandum of Understanding with Tribes.

Alternative 3 additions are underlined in the table below; deletions are shown in strike-through text. The reader can identify the carry-over text from Alternative 1 (normal text) and Alternative 2 (italic).

⁴ All strategies must be consistent with appropriate cultural resources and tribal relations strategies under Objectives 9 and 10

Objective 1	Ensure no significant risk to public health, safety and resources, and tribal archaeological and cultural resources from forest-management-related mass-wasting events.
Mass-wasting	<p>Strategies:</p> <ul style="list-style-type: none"> • <i>Timber harvest and road construction upon potentially unstable slopes (as defined in the “Slope Stability Assessment” and shown generally on Map G-2 “Potentially Unstable Slopes”) shall be carefully regulated.</i> <ul style="list-style-type: none"> ○ <i>Proposed activities on potentially unstable slopes shall be reviewed by the inter-jurisdictional committee who may make site specific recommendations.</i> ○ <i>Proposed activities on potentially unstable slopes will require on-site evaluation by a DNR specialist to determine actual unstable areas.</i> ○ <u>Potentially unstable slopes determined to be “unstable” based on this evaluation:</u> <ul style="list-style-type: none"> • <i>No road construction or timber harvesting will occur on areas identified during the above evaluation as unstable.</i> • <u>Leave a 140-foot edge buffer adjacent to areas identified as unstable.</u> • <u>Allow 20% thinning removal in the outer 50 feet of this edge buffer.</u> ○ <u>Potentially unstable areas not found to be “unstable” based on this evaluation (but shown on Map G-2)</u> <ul style="list-style-type: none"> • <u>Allow thinning removals that retain over 50 percent of the timber stand by basal area on potentially unstable slopes.</u> • <u>Almost no roads will be located on potentially unstable slopes.</u> ○ <i>Road reconstruction on areas identified by the above evaluation as unstable will consider inter-jurisdictional committee and specialists recommendations. <u>Almost no road reconstruction should occur on unstable slopes.</u></i> ○ <i>Timber harvesting or road construction outside of identified unstable areas, but within the mapped “potentially unstable slopes”, will consider inter-jurisdictional committee and specialists recommendations.</i> • <i>Slope stability assessment work generally identified “high hazard” and “moderate hazard” mass-wasting units (See Map G-1) within the potentially unstable slopes areas. Watershed Analysis Areas of Resource Sensitivity #1 is rated “moderate hazard”; ARS #2, 3 and 4 are rated “high hazard.”</i> <ul style="list-style-type: none"> ○ <i>Proposed activities on potentially unstable slopes shall be reviewed by the inter-jurisdictional committee, which may make site-specific recommendations.</i> ○ <i>Follow Lake Whatcom Watershed Analysis mass-wasting prescriptions relating to timber harvesting.</i> <ul style="list-style-type: none"> • <u>In addition, leave a 140-foot edge buffer adjacent to ARS #1, 2, 3 and 4.</u> • <u>Allow 20% thinning removal in the outer 50’ of this buffer.</u> ○ <i>On unstable slopes in ARS #1, #2, #3 and #4 or areas identified as unstable above, new road construction shall be prohibited and old road reconstruction shall be limited.</i> ○ <i>Follow Watershed Analysis prescription for road construction in ARS #1.</i> ○ <i>Existing road reconstruction will follow Watershed Analysis road construction prescriptions in ARS #1, 2, 3 and 4. <u>Almost no road reconstruction should occur on unstable slopes.</u></i> • <i>In Smith Creek, large woody debris, which increases the risk of log jams and resulting debris torrents, will be cut into chunks to reduce debris build up, to provide for public safety of downstream residents.⁵</i>
Objective 2	Maintain and restore the sediment regime within the range of natural variability.

⁵ This strategy is based on a negotiated legal settlement between DNR and residents in this area.

Roads & sediments	<p>Strategies:</p> <ul style="list-style-type: none"> Follow Forest Practice Rules and watershed analysis prescriptions for road construction and <u>maintenance in those areas allowed under this alternative, with one exception: stream crossings of Type 1-4 streams will only be allowed by concurrence with the inter-jurisdictional committee.</u> <ul style="list-style-type: none"> No road construction during “wet conditions” (typically Nov. 1 – March 31) unless the contractor can demonstrate that protection of resources can be provided. Minimize new road construction using harvest systems planning No timber and rock hauling during “wet conditions” on DNR forest roads without surfacing or surfaced with non-durable rock, where sediment has the potential to deliver to streams. Develop and begin implementation of a road maintenance and abandonment plan based on the specifications in WAC-222-24-050 and 051, within one year of the completion and approval of the landscape plan. <ul style="list-style-type: none"> All orphaned roads will be inventoried and assessed relative to risk of failure and/or potential for sediment delivery. Mitigation work on orphaned roads will be done where a clear risk to public safety or potential for resource damage exists and accessing the site will not cause greater resource damage or public risk. <u>Treat (abandon and/or reduce to low risk) all roads and orphaned roads that are high hazard to public safety and resource damage within three (3) years of approval of the landscape plan.</u>
Objective 3	Protect and restore riparian and wetland habitat to sustain healthy native aquatic, wetland, and riparian ecosystems.
RMZs	<p>Strategies:</p> <ul style="list-style-type: none"> Establish riparian management zones <i>along all streams</i> while planning management activities. Manage lands within such zones to protect water quality and riparian habitat. <i>Activities proposed within riparian management zones and wetlands shall be reviewed by the inter-jurisdictional committee, which may make site-specific recommendations.</i> <ul style="list-style-type: none"> Type 1, 2, and 3 waters shall have a designated riparian management zone with a minimum horizontal width (each side) equal to the 100-year site potential tree height or 100 feet, whichever is greater; timber harvest allowed per HCP and forestry handbook procedures. [Current procedures do not allow harvesting within riparian buffers. However, the HCP agreement anticipates that some harvesting will occur: (a) No timber harvest within the first 25 feet horizontal distance from the outer margin of the 100-year floodplain; (b) the next 75 feet of the riparian buffer shall be a minimal harvest area, and (c) the remaining portion of the riparian buffer shall be a low harvest area. The HCP provides performance goals for these three areas. Procedures to implement the HCP intent are still being developed.] Type 1 and 2 waters shall have a designated riparian management zone of 250 feet. Type 3 waters shall have a designated riparian management zone of 200 feet. Type 4 and 5 waters shall have a designated riparian management zone of 150 feet. with a minimum horizontal width (each side) of 100 feet; timber harvest allowed per HCP and forestry handbook procedures. Type 5 waters shall have a designated riparian management zone with a minimum horizontal width (each side) of 33 feet. No timber harvests shall occur in <u>Type 1 through 5 riparian management zones except as needed for roads and yarding corridors. Yarding corridors must constitute less than five (5) percent of the stream length. Only full-suspension yarding is allowed in these corridors.</u> <i>Trees cut for yarding corridors through type 5 riparian management zones shall be retained as down wood.</i> The riparian management zone distance will be measured horizontally from the outer edge of the 100-year flood plain. The width of the riparian management zone shall be increased to include an outer wind buffer, consistent with the HCP, on

	<p>Type 1, 2, & 3 in areas prone to wind-throw. Where there is at least a moderate potential for windthrow, wind buffers shall be <u>140 feet wide on all streams. 100 feet wide on Type 1 & 2 waters and 50 feet wide on Type 3 waters that are wider than 5 feet.</u> <u>Thinning up to 20 percent of the timber volume is allowed in the outer 50 feet of the wind buffer.</u></p>
Wetlands	<p>Strategies:</p> <ul style="list-style-type: none"> • <u>For all wetlands ¼ acre in size or greater, provide a buffer equal to the site potential tree height of a tree at age 200.</u> • <u>No timber harvest shall occur in the wetland nor in the inner first half (by distance) of the wetland buffer. Up to 20% timber thinning removal may occur in the outer half of the wetland buffer.</u> • <u>For wetlands less than ¼ acre, clump leave trees in the wetland.</u> • Provide forested wetland buffers on wetlands consistent with HCP riparian management strategy: <ul style="list-style-type: none"> ○ For wetlands greater than 1 acre in size, provide a wetland buffer equal in width to the 100 year site potential tree height or 100 feet, whichever is greater. ○ For wetlands greater than 0.25 acre and less than one acre, provide a 100 foot wetland buffer. • Ensure that timber harvest in forested portions of wetlands and wetland buffers perpetuate a wind firm stand with a minimum basal area of 120 square feet per acre.
Objective 4	Maintain and restore the forest hydraulic regime for each sub-basin within the range of natural variability.
Hydrologic maturity	<p>Strategies:</p> <ul style="list-style-type: none"> • <u>In each sub-basin, as these are defined in the Watershed Analysis, maintain at least 50% of the forested acres in the sub-basin at greater than 60 years of age.</u> • Follow Lake Whatcom watershed analysis prescriptions relating to hydrologic maturity in rain on snow zones: <ul style="list-style-type: none"> ○ Maintain a minimum of (692) acres of hydrologically mature (> 40 years) forest in the Olsen Creek sub-basin. ○ Maintain a minimum of (1,200) acres of hydrologically mature (> 40 years) forest in the Smith Creek sub-basin.
Objective 5	Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.
Chemicals	<p>Strategies:</p> <ul style="list-style-type: none"> • Follow Forest Practice Rules and Forest Resource Plan Policy No. 33 (Controlling Competing Vegetation). Use the following prioritized application methods: 1) no treatment, 2) non-chemical, and 3) ground-applied, and 4) Aerial applied. <u>No aerially-applied chemicals may be used (chemicals include dust abatement, insecticides, pesticides, or fertilizers).</u> Select a cost effective method by considering the no treatment method first and then move sequentially down the list. • Follow Forest Practice Rules and Forest Resource Plan Policy No. 33 (Controlling Competing Vegetation) and 34 (Thinning, Fertilizing, and Pruning). Use prioritized application method listed in Strategy 5.1. <u>No aerially-applied chemicals may be used (chemicals include dust abatement, insecticides, pesticides, or fertilizers)</u>
Objective 6	Maintain and restore a diversity of natural and managed functional habitat conditions to benefit native fish and wildlife species,

	particularly those identified in WDFW priority and habitat species (PHS).
Fish habitat	<i>Strategies:</i> <ul style="list-style-type: none"> • Ensure all native fish species have access throughout their natural range at all life stages. <ul style="list-style-type: none"> ○ Identify, prioritize, and replace fish-blocking culverts with fish-passage structures. Replacement will occur during planned management activities or during implementation of the Road Maintenance & Abandonment Plan. <u>Complete all this fish passage work within three (3) years after approval of the landscape plan.</u>
Older-forest conditions	<ul style="list-style-type: none"> • Retain riparian and wetland buffers and off-base unstable slope areas in older forest conditions, letting those not in that condition yet to grow into it. • <u>Manage the forest that is on-base for 140-year average rotation age.</u>
PHS Species	<i>Strategies:</i> <ul style="list-style-type: none"> • <u>For all wildlife species and uncommon habitats that have guidelines stated within the Washington Department of Fish and Wildlife's Priority Habitats and Species Management Guidelines, inventory and protect all existing suitable habitat according to those guidelines. For those priority habitats and species that have no guidelines, consult with the DNR region, tribal, and WDFW biologist. Habitats of concern include but are not limited to:</u> <ul style="list-style-type: none"> ○ Bald eagle nesting, roosting and foraging sites. ○ Marbled murrelet habitat. ○ Common Loon ○ Northern Goshawk ○ Pileated Woodpecker ○ Cliffs ○ Talus Fields ○ Caves ○ Balds • <u>Protect locally rare or uncommon native vegetative communities within the watershed that exhibit a combination of distinct age structure, species composition, structural diversity, or high wildlife value as identified in the assessment (e.g., the 100-year-old big-leaf maple stand). Determine protection measures by consultation with DNR region, affected tribes, and WDFW.</u>
Bald eagles	<ul style="list-style-type: none"> • Protect all known bald eagle nesting, roosting and foraging sites. <ul style="list-style-type: none"> ○ Follow Forestry Handbook Procedure PR 14-004-330 for protecting bald eagle nest sites and roosts, including the development of site management plans for bald eagle habitat pursuant to Forest Practices Regulations (WAC 232-12-292). • Follow the HCP riparian and large, structurally unique tree retention strategies, which should result in increased abundance of large trees for bald eagle nesting and roosting.
Marbled murrelet	<ul style="list-style-type: none"> • Conduct Pacific Seabird Group (PSG) protocol surveys of all known reclassified marbled murrelet habitat to determine occupancy. <ul style="list-style-type: none"> ○ Protect occupied stands and develop a long-term conservation strategy for the North Puget Planning Unit, as required in the HCP.
Unlisted	<ul style="list-style-type: none"> • Follow specific species by species Forestry Handbook procedures. The following unlisted species of concern have been identified in Table XX as existing in or near the Lake Whatcom landscape and have Forestry Handbook procedures in place. Where current procedures do not

species of concern	<p>XX as existing in or near the Lake Whatcom landscape and have Forestry Handbook procedures in place. Where current procedures do not exist, consult with the Region wildlife biologist.</p> <ul style="list-style-type: none"> ○ Common Loon—see Forestry Handbook Procedure PR 14-004-240: Protecting Common Loon Nests. ○ Northern Goshawk—see Forestry Handbook Procedure PR 14-004-260: Protecting Northern Goshawk Nests West of the Cascades. ○ Pileated Woodpecker—see Forestry Handbook Procedure PR 14-004-290: Protecting Pileated Woodpecker Nests.
Uncommon habitats	<ul style="list-style-type: none"> ● Follow specific Forestry Handbook Procedures. The following uncommon habitats have procedures: <ul style="list-style-type: none"> ○ Cliffs—see Forestry Handbook Procedure PR 14-004-190: Protecting Cliffs. ○ Talus Fields—see Forestry Handbook Procedure PR 14-004-170: Protecting Talus Field. ○ Caves—see Forestry Handbook Procedure PR 14-004-180: Protecting Caves. ○ Balds—see Forestry Handbook Procedure PR 14-004-220: Protecting Balds.
Objective 7	Permanently retain green trees, snags, & down logs to support mature forest functions.
Snags, green trees, down wood	<p>Strategies:</p> <ul style="list-style-type: none"> ● <u>Permanently retain 25% of the trees by basal area in any harvest unit.</u> <ul style="list-style-type: none"> ○ <u>Emphasize retention of all existing snags, where safe and practicable. (These count toward the 25%).</u> ○ <u>Retain all existing down logs.</u> ● Implement the following snag and green tree retention procedures on all harvest units, consistent with PR 14-006-090: <ul style="list-style-type: none"> ○ Retain seven (7) percent of all trees that are 12” dbh or larger or 8 trees per acre, whichever is greater, as permanent legacy trees. ○ Legacy trees shall be dominant and co-dominant trees ○ Legacy trees shall include at least five windfirm green trees and three snags per acre harvested (subject to Dept. of Labor and Industries safety standards) ○ Choose as legacy trees, large trees with structural characteristics important to wildlife and old growth remnants ○ One of these trees must be from the largest diameter class ○ One additional tree must be from the dominant crown class ○ Leave snags whenever safe and practicable. Retain snags that are at least 15” dbh and 30’ tall. Give priority to large hollow snags, hard snags with bark, and snags that are at least 20” dbh and 40’ tall. ○ If fewer than three snags per acre can be left, additional live trees will be retained so that the average per acre equals 7 percent or 8 trees per acre, whichever is greater.
Objective 8	Maintain or increase soil productivity and health.
Snags	<p>Strategies:</p> <ul style="list-style-type: none"> ● Implement the strategies for snag and green tree retention above.
Harvest methods	<ul style="list-style-type: none"> ● Select harvest methods that maintain or facilitate establishment of productive and healthy forest stands. ● Avoid using ground-based harvesting systems on slopes exceeding 30% and on soils sensitive to compaction.
Objective 9	Preserve, protect, and restore significant historic, archeological, traditional current use and cultural resources.
	<p>Strategies:</p> <ul style="list-style-type: none"> ● Identify and protect cultural resources using the following DNR policies, procedures, and guidelines, as well as state and federal acts, rules, regulations, accords, agreements, and executive orders. <ul style="list-style-type: none"> ○ Implement DNR Policy P006-001 <u>Historical, Cultural and Archaeological Sites, 7/31/96:</u> “All department personnel will

	<p>identify potential archaeological, historic and cultural sites/resources in the course of their normal duties. Discovered resources will be recorded and inventoried in coordination with the Office of Archaeological and Historic Preservation (OAHP) and/or the appropriate Tribes so that they can be protected to the full extent allowable by law.</p> <ul style="list-style-type: none"> ○ It is the policy of the department that Forest Resource Plan Policy #24 “Identifying Historic Sites,” shall apply to all department managed lands. That policy states “The department will establish a program to identify and inventory historic and archaeological sites and protect them at a level, which, at a minimum, meets regulatory requirements....” ○ DNR Tribal Policy PO06-002, Jan. 16, 1991 as referenced in Appendix F of the 1992 Forest Resource Plan, in PO06-001, and as reflected in the Revised DNR Tribal Policy, June 1998. ○ 1992 DNR Forest Resource Plan: Policy #8 “Special Forest Products”; Policy #13 “Special Ecological Features”; Policy #16 “Landscape Planning”; Policy #19 “Watershed Analysis”; Implement Policy #24: “Historic and Archaeological Sites”: “The department will establish a program to identify and inventory historic and archaeological sites and protect them at a level which, at a minimum, meets regulatory requirements.” Policy #28 “Developing and Maintaining Roads”; Policy #35 “Implementation Policies: Public Involvement”: “The department will solicit comment from the public, tribes, and government agencies when implementing the Forest Resource Plan and when revising policies contained in the document.” ○ DNR Forestry Handbook Procedures: PR 14-004-030 “Identifying Historic Sites”; PR 14-004-010 “Identifying Off-base Lands”; PR 14-004-110 “Wetland Management”. ○ DNR Final Habitat Conservation Plan (September 1997) and by reference: (1) DNR DEIS (March 22, 1996), 4.9 Cultural Resources, pgs. 4-525-4-528; and (2) DNR HCP FEIS (October 25, 1996), p. 3-121 C. Cultural. ○ Washington State Rules, Regulations, Agreements: RCW 27.34 <u>Archaeological and Historic Preservation</u>; RCW 27.44 <u>Indian Graves and Records</u>; RCW 27.53 <u>Archaeological Sites and Resources Act</u>; RCW 43.21C.020 & WAC 197-11 <u>State Environmental Policy Act</u>; RCW 25 <u>Office of Archaeology and Historic Preservation</u>; RCW 76.09 <u>Forest Practices Act</u>; WAC 222 <u>Forest Practices Rules</u>; <u>1999 Forest & Fish Plan</u> Appendices G: Cultural Resource Module, N2: DNR Cultural Resources Planning, O: Cultural Resources Management & Protection Plan; <u>1987 TFW Agreement</u>; <u>1989 Centennial Accord</u>. ○ Federal Regulations/Laws/Executive Orders: 36 CFR Part 800 <u>Protection of Historic Properties</u>; 42 U.S.C. <u>AIRFA American Indian Religious Freedom Act</u>; 33 U.S.C <u>Clean Water Act</u>; 16 USC <u>Endangered Species Act</u>; Title 16 U.S.C 1906 <u>Antiquities Act</u>; Title 16 U.S.C., PL 96-95 <u>Archaeological Resources Protection Act of 1979</u>; PL 101-601 <u>Native American Graves Protection and Repatriation Act</u>; PL 91-190 <u>National Environmental Policy Act</u>, as applicable to DNR HCP; 1971 Executive Order #11593 <u>Protection and Enhancement of the Cultural Environment</u>. ○ <u>Lummi Nation Code of Laws Title 40 Cultural Resources Preservation Code; Lummi Resolutions 92-124 & 125 .</u>
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	<ul style="list-style-type: none"> • Use the DNR Planning and Tracking (P&T) System, which links the user to DNR’s Total Resource Application Cross-Reference (TRAX) database system, prior to planning resource management activities to identify known Cultural Resources Sites, per DNR PR14-004-030 “Identifying Historic Sites”. • <u>DNR and the affected Tribes will develop a Cultural Resource Management Plan (CRMP), in consultation with the Office of Archaeology and Historic Preservation, that implements the Protection Needs and Comments/Recommendations columns in the Cultural Resource Matrix (Table5)⁶, the 1987 Timber, Fish, and Wildlife Agreement on Archaeological and Cultural Resources, and DNR policy P006-001. The CRMP will be completed and implemented within 1-year following adoption of the landscape plan.</u> <ul style="list-style-type: none"> ○ When management activities involve or affect cultural resources, DNR will meet with the affected tribe(s) with the objective of agreeing to a plan for protecting the archeological or cultural value. (per WAC 2222-20-120) • <u>Prior to implementation of the completed CRMP, DNR will consult with affected Tribes during timber harvest planning, as specified in a MOU, MOA, or other formalized agreement signed by DNR and the affected Tribes prior to implementation of the landscape plan. Protection of Traditional Cultural Properties identified during timber harvest planning will follow the Protection Needs and Comments/Recommendations columns in the Cultural Resource Matrix (Table5).</u> <ul style="list-style-type: none"> ○ DNR will meet regularly with the affected tribe(s) to discuss plans or management activities per PO06-002 Tribal Relations Policy, January 16, 1991 and June 2, 1998)
Objective 10	Provide and facilitate tribal access to state managed lands for traditional cultural and religious practices and treaty guaranteed hunting and gathering.
Tribal access	<p>Strategies:</p> <ul style="list-style-type: none"> • Tribal use is provided for by Policy No. PO10-002 (Public Use on DNR-Managed Trust Lands), provided resources and assets are not at risk. Tribal access for hunting, fishing and gathering per Point Elliott Treaty of 1855 Section 5 Open and unclaimed lands. <ul style="list-style-type: none"> ○ <u>Prior to implementation of the landscape plan, develop a Memorandum of Understanding (MOU) with affected Tribes regarding physical access for tribal members to state managed lands for traditional cultural and religious practices, and tribal ceremonial gathering and hunting.</u> ○ <u>Include Tribes in pre- and post- harvest planning, provide information sharing and access to do traditional practices.</u> ○ <u>Consult with Tribal staff during the development of the Lake Whatcom road maintenance and abandonment plan.</u>
Objective 11	Create and implement a sustained yield model specific to the Lake Whatcom watershed that encompasses the revised management standards and that is consistent with the sustained yield established by the Board of Natural Resources.
	<p>Strategies:</p> <ul style="list-style-type: none"> • The average rotation age is consistent with Forest Resource Plan policy as specified by site and species—generally averaging 60 years. • <u>Forest management rotation age will average 140 years.</u> • Harvest trees in dense stands (commercial thinning), before trees die from stand competition, to capture revenue that would otherwise be lost.

⁶ The Cultural Resource Matrix (Table 5) is located in Appendix D, Cultural Resource Assessment.

Objective 12	Maintain or improve commercial forest productivity and health.
	Strategies: <ul style="list-style-type: none"> • Select a harvest method that maintains or facilitates establishment of productive and healthy forest stands. • Avoid using ground-based harvesting systems on slopes exceeding 30% and on soils sensitive to compaction. • Following regeneration harvests, reforest with a majority of Douglas-fir intermixed with Western redcedar at all elevations in the planning area. <u>Where appropriate, rely on natural regeneration.</u> • Pre-commercially thin overstocked stands. • During the first two decades of the plan, accelerate the harvest of mature and over-mature hardwood stands on sites better suited for conifers. • Control competing vegetation that would dominate crop trees or significantly inhibit growth in a stand.
Objective 13	Cultivate higher value commercial forest products.
	Strategies: <ul style="list-style-type: none"> • Plant and encourage growth of western redcedar to develop pole products. • Prune, to increase wood quality, where it will generate a higher economic return. • Consider tree selection during commercial thinning that promotes future log quality.
Objective 14	Develop and maintain a transportation network that facilitates commercial management activities.
	Strategies: <ul style="list-style-type: none"> • Develop and begin implementation of a Road Maintenance and Abandonment Plan within one year of the completion and approval of the landscape plan. • Use harvest system planning to identify necessary roads and reduce the total length of new road construction. • Abandon roads to Forest Practices standards when they are no longer needed for management. • Install and maintain gates where necessary to reduce road maintenance costs, resource impacts, vandalism, and garbage dumping.
Objective 15	Maintain and increase lease revenue from existing and future communication sites.
	Strategies: <ul style="list-style-type: none"> • Continue to lease tower and building space to interested parties. • When possible, review rental rates. Increase rates if market conditions allow. • Seek new communication site customers.
Objective 16	Consider opportunities to generate revenue from oil and gas exploration.
	Strategies: <ul style="list-style-type: none"> • Limit exploratory drill sites to surface locations outside the watershed. Subsurface diagonal drilling allowed. • If sufficient oil or gas reserves are found, allow development of the resource if compatible with other landscape objectives.
Objective 17	Consider the marketing of special forest products such as evergreen boughs, salal greens, moss, and native plants, as appropriate.
	Strategies: <ul style="list-style-type: none"> • Ensure potential products, if sold, will not negatively impact other resource objectives or traditional tribal use.
Objective 18	Consider other revenue generating mechanisms.
	Strategies: <ul style="list-style-type: none"> • Green certification • Carbon sequestration

	<ul style="list-style-type: none"> • Lease(s) • Conservation easement • Reconveyance • Exchange or sell trust lands <i>consistent with the respective alternative.</i> • <i>Recreational fees.</i>
Objective 19	Manage dispersed, low impact recreation.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Public use and recreation is allowed in accordance with Policy No. PO10-002 (Public Use on DNR-Managed Trust Lands), provided resources and assets are not at risk. <ul style="list-style-type: none"> ◦ Consult with tribal staff to ensure that the DNR’s public use policy is consistent with Objectives 9 and 10. • As budget allows, develop a comprehensive recreation plan in cooperation with specific user groups such as the horseback riders, mountain bikers, hikers and other interested parties that minimizes impacts to trust resources and assets. • Limit access to streams, riparian areas, and wetlands by motorized vehicles through permanent road closures, vehicle barriers, and public education and enforcement.
Objective 20	Reduce the visual impact of forest management activities in high visibility areas as shown on Map S-1.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Follow Forest Practice Regulations and Forest Resource Policy No. 32 (Green-up of Harvest Units), in conjunction with Policy No. 16 (Landscape Planning). • On all the state trust lands, including “moderate visibility” areas on Map S-1, the following guidelines will be used for even-aged harvest units: <ul style="list-style-type: none"> ◦ Harvest units will not exceed 100 acres except in the case of emergency salvage operations due to extensive "blowdown", insect or disease infestation, or public safety concern. ◦ No harvesting within 300 feet of another harvest area if combined acreage of harvest areas exceeds 100 acres ◦ Harvest units with trees greater than 4 feet high are considered “greened-up.” • In “high visibility” areas on Map S-1, the department will consider the size, shape, and location of harvest units and distribution of leave trees when planning timber sales. •
Objective 21	Support stewardship education opportunities and partnerships that address community needs.
	<p>Strategies:</p> <ul style="list-style-type: none"> • Cooperate with and provide educational opportunities to requesting educational institutions and other interested parties consistent with the department’s public use policy No. PO10–002. • DNR will continue to be an active participant in the Forest Practices Timber Fish Wildlife (TFW) process and the Lake Whatcom Forestry Forum.

Alternative 4⁷:

This alternative, developed by the Committee, provides a second alternative to Alternative 2. Like Alternative 3, it was intended to provide a range of options to be considered, and was not developed as a Committee-preferred alternative.

Alternative 4 sets still higher percentages, wider buffers, etc. These differences primarily include:

- setting wider buffers on unstable slopes and riparian areas;
- prohibiting any harvest in the wetland or its buffer;
- requiring wind buffers on all riparian management zones;
- allowing less harvest within buffers;
- limiting road reconstruction on unstable slopes;
- setting more stringent stream crossing design requirements;
- prohibiting yarding corridors in riparian areas;
- setting a higher percentage for the amount of forest that must be hydrologically mature in each sub-basin;
- further increasing the average rotation age;
- setting tighter restrictions on hauling seasons;
- reducing the time allowed to treat high-risk roads and fish blockages;
- disallowing chemicals for vegetation control, fertilization, pest and disease control, and dust abatement.
- requiring concurrence among specialists for decisions about habitat protection;
- further increasing the percentage of trees to be retained in harvest units; and
- restricting exploratory drilling and seismic work for oil and gas

The additions in Alternative 4 are shown in underlined italic text; deletions are shown as additional strike-through. The reader can identify the carry-over text from Alternative 1 (normal text), Alternative 2 (italic) and Alternative 3 (underlined).

⁷ All strategies must be consistent with appropriate cultural resources and tribal relations strategies under Objectives 9 and 10